AMENDMENTS TO THE CLAIMS

1. (Previously presented) A method of forming a magnetic random access memory, said method comprising:

forming a plurality of spaced apart first conductive layers over an insulating layer formed over a substrate;

forming a plurality of spaced apart magnetic memory element stacks over said plurality of first conductive layers, wherein each of said magnetic memory element stacks is formed by the steps of forming a first magnetic layer over a corresponding first conductive layer and forming a second magnetic layer over said first magnetic layer, said second magnetic layer having an associated top conductive layer;

forming an insulating material over and in between said spaced apart magnetic memory element stacks; and

removing at least a portion of said insulating material over at least one of said memory element stacks to expose the top conductive layer of said at least one memory element stack.

2. (Previously presented) The method of claim 1, wherein said act of removing at least a portion of said insulating material further comprises exposing an upper surface of said top conductive layer.

3. (Previously presented) The method of claim 1, further comprising forming a nonmagnetic layer between said second magnetic layer and said first magnetic layer.

4. (Previously presented) The method of claim 2, wherein said insulating material is removed to expose an upper surface of a plurality of top conductive layers associated with respective memory element stacks, said method further comprising forming a plurality of second conductors each in electrical connection with a plurality of said exposed upper surfaces, said plurality of second conductors running substantially orthogonal to said plurality of first conductive layers.

5. (Previously presented) The method of claim 1, wherein said act of removing at least a portion of said insulating material further comprises chemical mechanical polishing of said insulating material to expose an upper surface of said top conductive layer.

6. (Previously presented) The method of claim 1, wherein said top conductive layer is formed of a material selected from the group consisting of tungsten nitrogen, tungsten, gold, platinum and copper.

7. (Original) The method of claim 1, wherein said insulating material is formed of a material selected from the group consisting of silicon nitride and oxides.

8. (Original) The method of claim 1, wherein said insulating material is a high temperature polymer.

9. (Original) The method of claim 1, wherein said insulating material is a low dielectric constant inorganic material.

10. (Original) The method of claim 1, wherein said insulating material is silicon nitride.

11. (Previously presented) The method of claim 1, wherein said act of forming said first magnetic layer further comprises the step of forming a first plurality of stacked layers, said first plurality of stacked layers including at least one magnetic material layer.

12. (Original) The method of claim 11, wherein said magnetic material layer contains a material selected from the group consisting of tantalum, nickel-iron, tungsten-nitrogen, nickel, cobalt-nickel-iron, iron, and manganese-iron.

13. (Original) The method of claim 12, wherein said first plurality of stacked layers comprises layers of tantalum, nickel-iron and manganese-iron.

14. (Original) The method of claim 12 further comprising etching said first plurality of stacked layers to have a width which coincides with the width of said first conductive layers.

15. (Previously presented) The method of claim 1, wherein said act of forming said second magnetic layer further comprises forming a second plurality of stacked layers, said second plurality of stacked layers including at least one magnetic material layer and said conductive layer.

16. (Original) The method of claim 15, wherein said magnetic material layer includes a material selected from the group consisting of tantalum, nickel-iron, tungsten-nitrogen, nickel, cobalt-nickel-iron, iron, and manganese-iron.

17. (Original) The method of claim 16, wherein said second plurality of stacked layers comprises layers of tantalum, nickel-iron and tungsten nitrogen.

18. (Original) The method of claim 16, further comprising etching said second plurality of stacked layers.

19. (Previously presented) The method of claim 1, wherein said first magnetic layer has a pinned magnetic orientation.

20. (Previously presented) The method of claim 1, wherein said second magnetic layer has a free magnetic orientation.

21. (Previously presented) A method of forming a magnetic random access memory, said method comprising:

forming a plurality of spaced apart first conductive layers over an insulating layer formed over a substrate;

forming a plurality of spaced apart magnetic memory element stacks over said plurality of first conductive layers, wherein each of said magnetic memory element stacks is formed by the steps of forming a first magnetic layer over a corresponding first conductive

layer and forming a second magnetic layer over said first magnetic layer, said second magnetic layer having an associated a top conductive layer;

forming an insulating material over and in between said spaced apart magnetic memory element stacks;

removing at least a portion of said insulating material to expose upper surfaces of a plurality of said memory element stacks; and

forming a plurality of spaced apart second conductive layers over respective sets of said exposed upper surfaces, said second conductive layers running substantially orthogonal to said first conductive layers, one of said first and second conductive layers being bit lines and the other of said first and second conductive layers being word lines.

22. (Previously presented) The method of claim 21, further comprising forming a nonmagnetic layer between said first magnetic layer and said second magnetic layer.

23. (Previously presented) The method of claim 22, wherein said nonmagnetic layer is formed of a material selected from the group consisting of aluminum oxide, titanium oxide, magnesium oxide, silicon oxide and aluminum nitride.

24. (Original) The method of claim 21, wherein said act of forming said insulating material further comprises depositing said insulating material.

25. (Original) The method of claim 21, wherein said act of removing portion of said insulating material further comprises chemical mechanical polishing of said insulating material relative to said upper surfaces of said top conductive layers.

26. (Original) The method of claim 21, wherein said top conductive layers are formed of a material selected from the group consisting of tungsten nitride, tungsten, gold, platinum and copper.

27. (Original) The method of claim 21, wherein at least one of said top conductive layers is formed of tungsten nitride.

28. (Original) The method of claim 21, wherein at least one of said top conductive layers is formed of tungsten.

29. (Original) The method of claim 21, wherein said insulating material is formed of a material selected from the group consisting of silicon nitride and oxides.

30. (Original) The method of claim 21, wherein said insulating material is a high temperature polymer.

31. (Original) The method of claim 21, wherein said insulating material is a low dielectric constant inorganic material.

32. (Original) The method of claim 21, wherein said insulating material is silicon nitride.

33. (Previously presented) The method of claim 21, wherein said act of forming said first magnetic layer further comprises the step of forming a first plurality of stacked layers, said first plurality of stacked layers including at least one magnetic material layer.

34. (Original) The method of claim 33, wherein said magnetic material layer contains a material selected from the group consisting of tantalum, nickel-iron, tungsten-nitrogen, nickel, cobalt-nickel-iron, iron, and manganese-iron.

35. (Original) The method of claim 34, wherein said first plurality of stacked layers comprises layers of tantalum, nickel-iron and manganese-iron.

36. (Original) The method of claim 34 further comprising etching said first plurality of stacked layers to have a width which coincides with the width of said plurality of first conductive layers.

37. (Previously presented) The method of claim 21, wherein said act of forming said second magnetic layer further comprises forming a second plurality of stacked layers, said second plurality of stacked layers including at least one magnetic material layer and said top conductive layer.

38. (Original) The method of claim 37, wherein said magnetic material layer includes a material selected from the group consisting of tantalum, nickel-iron, tungsten-nitrogen, nickel, cobalt-nickel-iron, iron, and manganese-iron.

39. (Original) The method of claim 38, wherein said second plurality of stacked layers comprises layers of tantalum, nickel-iron and tungsten nitrogen.

40. (Original) The method of claim 39 further comprising etching said second plurality of stacked layers.

41. (Previously presented) The method of claim 21, wherein said first magnetic layer has a pinned magnetic orientation.

42. (Previously presented) The method of claim 21, wherein said second magnetic layer has a free magnetic orientation.